

---

## A New *Xylopi*a (Annonaceae) from Panama

George E. Schatz

Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299, U.S.A.

---

ABSTRACT. *Xylopi*a *panamensis* sp. nov. is proposed based on material from Santa Rita Ridge and El Llano-Cartí road formerly referred to *Xylopi*a *bocatorena* Schery. The new species differs from *X. bocatorena* by its rounded leaf base, longer indument on the bracts and calyx, smaller flowers, fewer seeds per monocarp, and thus shorter monocarps.

Reexamination of Mesoamerican material of *Xylopi*a in conjunction with the preparation of a treatment of the Annonaceae for the *Manual to the Plants of Costa Rica* has revealed a previously undescribed species from Colón and San Blas Provinces, Panama.

***Xylopi*a *panamensis*** G. E. Schatz, sp. nov. TYPE: Panama. San Blas: El Llano-Cartí road, km 26.5, 9°19'N, 78°55'W, 200 m, 17 June 1986 (fl, fr), *de Nevers, Herrera, McPherson, D'Arcy & Allen 7836* (holotype, MO; isotypes, PMA not seen, U). Figure 1.

Ab *Xylopi*a *bocatorena* lamini basi rotundatis, bracteis ut calyces dense aureosericeis, pilis ad 2 mm longis, floribus minoribus, semenibus paucioribus, monocarpis brevioribus differt.

Tree 4–14 m tall, the young branches initially sparsely covered with short, spreading hairs, at length glabrescent. Petiole slender, 2–6 mm long, sparsely covered with short, spreading hairs; lamina chartaceous to slightly membranaceous, broadly lanceolate to narrowly ovate, 5.5–12.5 cm long, 1.7–5.2 cm broad, the apex long acuminate to cuspidate, the acumen 1–2 cm long, the base rounded to truncate, rarely obtuse, the upper surface glabrous, the lower surface sparsely covered with appressed, white hairs to 1.5 mm long; venation very weakly brochidodromous with 6–10 faint secondary veins per side, the primary vein even with the lamina surface adaxially, somewhat elevated and sparsely covered with appressed, white hairs to 1.5 mm long abaxially. Flowers solitary, axillary. Pedicel 2–4 mm long, borne in the axil of a basal round bracteole and bearing 1–2 additional distichous, broadly ovate amplexicaul bracts, 5 mm long and broad, the apex acute, densely long golden sericeous, the hairs to 2

mm long. Sepals 3, connate at the base for ½ their length, broadly ovate, 6–9 mm long, the lobes 5–8 mm broad, the apex acute, densely long golden sericeous outside, the hairs to 2 mm long, glabrous inside. Petals 6, in 2 valvate whorls, fleshy, white; outer petals ovate to narrowly elliptic, strongly concave, 7 mm long, 4–5 mm broad, 1 mm thick, the apex acute, the base obtuse, densely short white sericeous outside, very short tomentellous inside, with a medial keel inside toward the apex marking the line along which adjacent inner petals meet; inner petals rhombic-trullate, 5 mm long, 3 mm broad, 0.5 mm thick, the apex acute, the base cuneate, strongly concave where the petal fits tightly against the androecium, densely short white sericeous outside, glabrous inside. Torus conical, 3.2 mm diam., with a central cavity into which the ovaries are embedded. Stamens ca. 200 (based on scars from the filament bases on the torus), stamens lacking; carpels 3–8 (based on fruiting monocarps present), ovaries lacking. Fruit a cluster of separate stipitate dehiscent monocarps, the stipe 2–3 mm long, the monocarp shortly cylindrical to ellipsoid, to 3 cm long, 1.5 cm diam., the apex strongly apiculate, and with 1 to several additional beaklike protuberances along the margin of dehiscence, the surface initially densely sericeous, at length puberulent, red; seeds 2–3, interdigitated to form a single row, flattened ellipsoid, 10 mm long, 6 mm diam., shiny black with a fleshy, bilobed, white aril at the base.

Much of the material cited has previously been determined as *Xylopi*a *bocatorena* Schery, to which the new species, *X. panamensis*, is undoubtedly closely related, and with which it is wholly sympatric. In several respects—leaf length and seed number (and therefore, monocarp length)—the new species conforms well to the original description of *X. bocatorena* (in Woodson & Schery, 1943). However, as numerous collections of *X. bocatorena* have accumulated from Nicaragua to El Llano-Cartí Road in Panama, these two features of the type material (*von Wedel 2965* (HT: MO)) from Bocas del Toro, Panama, have proven anomalous. Leaves on the type fall within the lower end of the overall range in variation of leaf length; indeed, *X. bocatorena* often displays leaves considerably longer (to 22 cm)

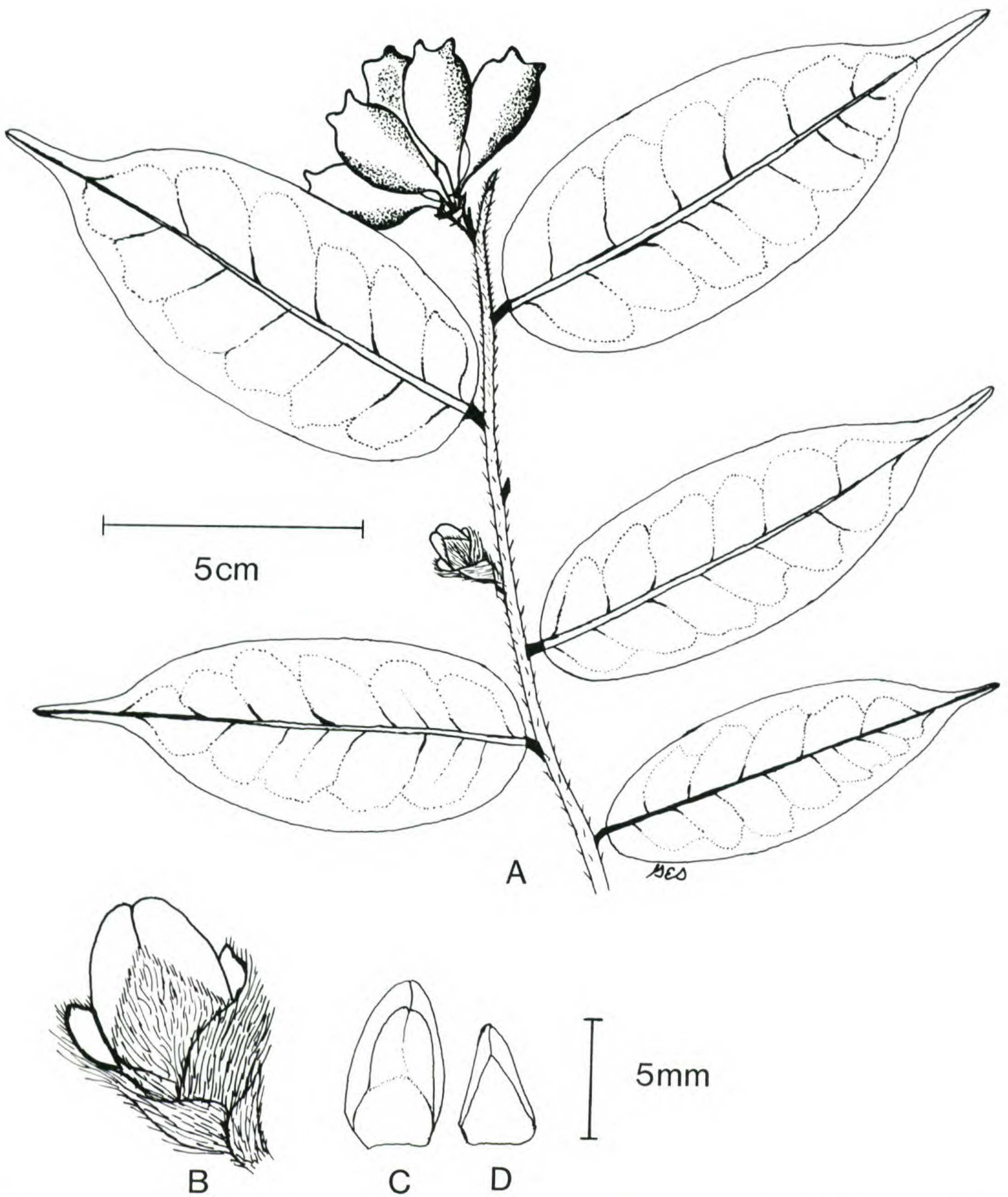


Figure 1. *Xylopia panamensis* G. E. Schatz (from *de Nevers et al.* 7836 (flower) and *Knapp & Schmalzel* 1792 (fruit)). —A. Composite flowering and fruiting branch. —B. Flower with subtending bracts. —C. Adaxial view of outer petal. —D. Adaxial view of inner petal.

than those on the type (8–11 cm). Similarly, the number of seeds (2), and hence, minimum number of ovules, described from the type is unusually low, resulting in a concomitantly short monocarp (2 cm). Usually, ca. 6 ovules are present (to 10), resulting in a cylindrical monocarp 5 cm long. Thus, in general *X. panamensis* can be characterized by fewer

seeds, resulting in a shorter, more flattened ellipsoid monocarp, which, moreover, has one to several curious beaklike appendages along the margin of dehiscence, which are lacking on monocarps of *X. bocatorena*.

*Xylopia panamensis* differs further from *X. bocatorena* by a more rounded versus cuneate to ob-

tuse leaf base, generally smaller flowers, and especially by the markedly longer (to 2 mm long vs. less than 0.5 mm long) golden sericeous indument on the bracts and calyx. Among several other northern South American species of *Xylopia* with solitary, relatively large flowers, *X. panamensis* also exhibits affinities with *X. chocoensis* R. E. Fries in the size and shape of the monocarps and a rounded leaf base (Fries, 1955). However, leaves of *X. chocoensis* are nearly always longer (12–15 cm long), and the number of carpels (ca. 25) is significantly greater.

*Paratypes.* PANAMA. **Colón:** Santa Rita E Ridge, 23 Jan. 1968 (fr), *Dwyer 8421* (MO), 300–500 m, 16 Dec. 1972 (fr), *Gentry 6571* (MO), 21 km from Transisthmian Hwy., 9°26'N, 79°38'W, 400–500 m, 23 Oct.

1981 (fr), *Knapp & Schmalzel 1792* (MO, U), ca. 4–5.5 mi. E of Transisthmian Hwy., 6 Apr. 1969 (fl, fr), *Lewis et al. 5275* (MO), 20–25 km from Transisthmian Hwy., 9°24'N, 79°39'W, 30–400 m, 25 Sep. 1980 (fr), *Sytsma 1354* (MO), 10 Oct. 1980 (fr), *Sytsma 1526* (MO), ca. 3.1 km E of Agua Clara rain gauge, 9 Sep. 1975 (fr), *Witherspoon et al. 8316* (MO).

#### Literature Cited

- Fries, R. E. 1956. Some new contributions to the knowledge of the Annonaceae in Colombia and Mexico. *Ark. Bot.*, n.s., 3(12): 433–437.
- Woodson, R. E. & R. W. Schery. 1943. Contributions towards a flora of Panama. VII. Miscellaneous collections, chiefly by H. von Wedel in Bocas del Toro. *Ann. Missouri Bot. Gard.* 30: 83–96.